

## Quiz 8: Properties of Solids and MO Theory

(10 pts)

1. Why is an ionic solid brittle and a metallic solid is malleable? Illustrate your answer to support your answer. (5 pt)
  
2. Draw the shape of a  $\sigma_{2p}$  molecular orbital. (2 pt)
  
3. For the peroxide ion,  $\text{O}_2^{2-}$ , write the electron configuration for the molecular orbitals (valence electrons only). Assume the “normal” ordering of the orbitals (no sp-mxing). (3 pt)